

All Active Assumptions Report

Identifier: A&P-01

Description: Airspace Modernization Assumptions
a) Flexibility into any of the agency's facility plans
b) Future Airspace & NASA research funding is sufficient and provides favorable benefits
c) System Dependencies
1) ADS-B
2) ERAM
3) TFMS WP2
4) DataComm

Primary Roadmap: Airspace and Procedures

Related Decision(s): [218] CRDR for migration to L-band for DataComm
[269] Identify locations (e.g. additional TRACONS and previously re-designed facilities)

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 48 / 3

Identifier: A&P-02

Description: Big Airspace (BA) Assumptions
a) Key BA enablers:
1. Extension of 3 Mile Separation & Terminal Procedures
2. Integrated arrival/departure airspace configurations
3. Flexible sector & bi-directional routes published
4. 5 mile lateral spacing for Required Navigation Performance (RNP) enables 5 mile lateral route spacing
5. New Voice switch, leased circuits, and Air-Ground communications channels to handle transition
6. Cost benefits are based on creating X Big Airspace facilities, covering X major metropolitan areas
b) Cost analysis based on general assumptions about the concept, not on any detailed requirements or technical solutions
c) Benefits analysis based on extrapolating results from FT simulations to other sites given traffic forecasts and historical weather patterns
d) Sites identified where large TRACON facilities exist could accommodate additional BA operational positions with refurbishment. New buildings would be needed where no large TRACON exists.

Primary Roadmap: Airspace and Procedures

Related Decision(s): [267] Decision to proceed with High Altitude Generic Airspace Concept Phase 1

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 49 / 3

Identifier: AC-01

Description: The roadmap identifies four phases
a) Conops development and R&D in required areas
b) Standards development
c) AVS Approval
d) Deployment. After the standards process is complete, and manufacturers have developed, integrated, fully tested and made new avionics available, aircraft, engines and fuels available, an additional 7 to 10 years is needed to achieve wide scale equipage of a new capability
1. Different aircraft are expected to equip with different equipment. This roadmap does not currently distinguish between aircraft types.
(Transport dominates; need to add GA)

Primary Roadmap: Aircraft

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 1 / 3

Identifier: AC-02

Description: The aircraft roadmap includes environment research areas and assumptions and linkage to Non-NAS EA.

Primary Roadmap: Aircraft

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 2 / 3

Identifier: AC-03

Description: Harmonization of Avionics EA with ground systems not complete in areas of Air-Ground Security, Human-System Integration. Trajectory Operations/FMS (2009)

Primary Roadmap: Aircraft

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 3 / 3

Identifier: AC-04

Description: Any air vehicle to include any UAS that participate in the NAS must operate in a way that is transparent to the ANSP.

Primary Roadmap: Aircraft

Related Decision(s): [85] Investment Decision (IARD) to Consolidate & Replace Automated Surface Observing Systems

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 4 / 3

Identifier: AG-01

Description: Harmonization of Air/Ground System functions not complete:
End-to-End concepts, approvals, performance, safety, security are general concerns regarding the NAS
Any operation or improvement that is dependant on ACAS (TCAS), airborne automation, automatic dependent surveillance in, and addressing (IP) are far term implementations.

Primary Roadmap: Air / Ground

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 5 / 2

Identifier: AG-02

Description: Synchronization of airborne and ground capabilities and infrastructure remains open
(a) A minimum of 7 to 10 years is needed to achieve fleet-wide aircraft equipage of a new capability, from the time equipment becomes available.
(b) Ground systems continue to be developed from a bottoms-up approach resulting in mission gaps and performance mismatch.

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 6 / 2

Identifier: AG-03

Description: Air-Ground standards will evolve from a technology-based to an integrated performance-based approach.

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 7 / 2

Identifier: AG-04

Description: Functions such as airborne TCAS, Ground Conflict Probe, and ADS-B conflict management are becoming temporally overlapping

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 8 / 2

Identifier: AG-05

Description: Air-Ground Challenges:
Air-Ground Interoperability/ Safety Nets
NextGen Equipage Insertion Strategy
PNT Duplicative Services
Air-Ground Future Communications Analysis
Closely Spaced Parallel Operations
UAS ATC Interoperability
Air-Ground Functional Allocation (Human-Automation Centric Operations)
Mixed Performance
Air-Ground DEF Performance Requirements Validation

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 77 / 3

Identifier: AG-06

Description: NAS weather systems are not depicted on the A/G Roadmap. (See Weather Roadmap).

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 78 / 2

Identifier: AG-07

Description: The A/G Roadmap interfaces with other NASEA Roadmaps and does not include any stand alone systems.

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 79 / 2

Identifier: AG-08

Description: Synchronize Aircraft Equipage with Ground Infrastructure and Acquisition: Aircraft equipage may include ADS-B (in), GNSS, Beacon Transponder, TCAS, TAWS, navigation requirements, Data Link, Weather Sensors, (temp, wind, humidity, turbulence, icing, and wake) and TIS-B/ FIS-B.

Primary Roadmap: Air / Ground

Related Decision(s): [188] Planning Decision-Research Transition Integrated and base-lined Air-Ground Concepts
[194] Planning Decision: Incorporate results into future Requirement for NextGen Technology and Human/Automation intensive operations

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 80 / 3

Identifier: AG-09

Description: SWIM Air Capabilities: 1.) Airborne SWIM supports advisory communications through NNEW and commercial communication services (e.g. Iridium, InmarsatSBB, AirCell, XM Aviator). 2.) No mandatory equipment envisioned for airborne SWIM capability.

Primary Roadmap: Air / Ground

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 81 / 2

Identifier: AG-10

Description: A-G tasks are aligned and compliment NASEA DP's and Air-Ground Evolution Environment. NASEA DP's should address A-G Challenge to support NextGen success.

Primary Roadmap: Air / Ground

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 97 / 1

Identifier: AG-11

Description: AVS provides advice and guidance on NextGen Concepts that are being developed. AVS supports NextGen from a Regulatory perspective (i.e. findings of compliance), however, their current role does not allow defining specific design requirements for end-to-end system interoperability.

Primary Roadmap: Air / Ground

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 98 / 1

Identifier: APT-01

Description: This roadmap will initially focus on the airport airside activities of aircraft out to about 5 miles. Hooks will be provided to allow other portions of the airport to be included in the future.

Primary Roadmap: Airport

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 99 / 1

Identifier: APT-02

Description: Airports are covered in general; specific airports are not described.

Primary Roadmap: Airport

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 100 / 1

Identifier: APT-03

Description: Initial work covers OEP-35 caliber airports; other types are subsets or will be covered later (eg. seaplane ports, heliports, space ports, grass field airports, etc.)

Primary Roadmap: Airport

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 101 / 1

Identifier: APT-04

Description: Key decisions are pulled from other roadmaps.

Primary Roadmap: Airport

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 102 / 1

Identifier: APT-05

Description: This is an initial roadmap that connects FAA infrastructure elements to airport airside infrastructure elements, and provides a basis for future tracking of the boundary and boundary issues.

Primary Roadmap: Airport

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 103 / 1

Identifier: AUTO-01

Description: Net-centric Enterprise Services will replace designated existing point to point interfaces with a system based on a Service Oriented Architecture providing enhanced data exchange, enhanced flexibility, and enhanced security for FAA Operations Personnel, and airspace users within a common information environment to support NextGen Operational Improvements.

Primary Roadmap: Automation

Related Decision(s): [30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[107] TAMR Phase 3 Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[121] AIM Modernization Segment 2 Final Investment Decision
[376] Interface RMLS with SWIM Segment 2 Executive Level Decision
[386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision
[387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision
[388] NextGen ATOP/Offshore Automation Initial Investment Decision
[389] NextGen ATOP/Offshore Automation Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 9 / 3

Identifier: AUTO-02

Description: ADS-B is a necessary infrastructure element to support Trajectory Based Operations, Flexible Terminal, and High Density Terminal solution sets.

Primary Roadmap: Automation

Related Decision(s): [30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[107] TAMR Phase 3 Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision
[367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision

[368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision
[386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision
[387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision
[388] NextGen ATOP/Offshore Automation Initial Investment Decision
[389] NextGen ATOP/Offshore Automation Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 11 / 3

Identifier: AUTO-03

Description: Data Communication is a necessary infrastructure element to support Trajectory Based Operations, Flexible Terminal, and High Density Terminal solution sets.

Primary Roadmap: Automation

Related Decision(s): [30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision
[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[122] AIM Modernization Segment 3 Final Investment Decision
[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
[201] En Route /Oceanic IES NextGen WP Initial Investment Decision
[202] En Route /Oceanic IES NextGen WP Final Investment Decision
[358] En Route /Oceanic IES NextGen WP Concept and Requirements Definition Readiness Decision
[359] En Route /Oceanic IES NextGen WP Investment Analysis Readiness Decision
[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
[369] AIM Modernization Segment 3 Concept and Requirements Definition Readiness Decision
[370] AIM Modernization Segment 3 Investment Analysis Readiness Decision
[371] AIM Modernization Segment 3 Initial Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 12 / 3

Identifier: AUTO-04

Description: Existing automation platforms will provide the basis for the Next Generation capabilities through the mid-term.

Primary Roadmap: Automation

Related Decision(s): [44] Time Based Flow Management (TBFM)/Integrated Enterprise Solution (IES) Initial Investment Decision
[57] TBFM/IES Final Investment Decision
[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision
[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision
[275] Terminal Automation NextGen Mid-Term Work Package Initial Investment Decision
[276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision
[357] TBFM/IES Investment Analysis Readiness Decision
[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
[362] Terminal Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
[363] Terminal Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
[372] TBFM/IES Concept and Requirements Definition Readiness Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 13 / 3

Identifier: AUTO-05

Description: New platforms will only be added to augment existing automation systems when necessary.

Primary Roadmap: Automation

Related Decision(s): [2] AIM Modernization Segment 1 Final Investment Decision
[30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[33] Investment Analysis Readiness Decision for Security Integrated Tool Suite (SITS)
[44] Time Based Flow Management (TBFM)/Integrated Enterprise Solution (IES) Initial Investment Decision
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[57] TBFM/IES Final Investment Decision
[65] Common Information Display Systems (IDS) capability in En Route and Terminal Final Investment Decision
[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision
[83] Transition to NextGen Far Term automation platforms and display subsystem through convergence Initial Investment Decision
[107] TAMR Phase 3 Final Investment Decision
[110] Approve final investment for transition to NextGen automation platforms and display subsystem through convergence
[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[121] AIM Modernization Segment 2 Final Investment Decision
[122] AIM Modernization Segment 3 Final Investment Decision
[125] Alaska Flight Service Modernization (AFSM) Segment 1 Final Investment Decision
[177] Initial Investment Decision for SITS Air Domain Security Architectures
[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
[201] En Route /Oceanic IES NextGen WP Initial Investment Decision
[202] En Route /Oceanic IES NextGen WP Final Investment Decision
[206] Final Investment Decision for SITS Air Domain Security Architecture
[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision
[218] CRDR for migration to L-band for DataComm
[275] Terminal Automation NextGen Mid-Term Work Package Initial Investment Decision
[276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision
[346] Final Investment Decision for CATMT Work Package 4
[354] CATMT Work Package 4 Concept and Requirements Definition Readiness Decision
[355] CATMT Work Package 4 Investment Analysis Readiness Decision
[356] CATMT Work Package 4 Initial Investment Decision
[357] TBFM/IES Investment Analysis Readiness Decision
[358] En Route /Oceanic IES NextGen WP Concept and Requirements Definition Readiness Decision
[359] En Route /Oceanic IES NextGen WP Investment Analysis Readiness Decision
[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision

[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
 [362] Terminal Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
 [363] Terminal Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
 [364] Transition to NextGen Far Term automation platforms and display subsystem through convergence Concept and Requirements Definition Readiness Decision
 [365] Transition to NextGen Far Term automation platforms and display subsystem through convergence Investment Analysis Readiness Decision
 [367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision
 [368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision
 [369] AIM Modernization Segment 3 Concept and Requirements Definition Readiness Decision
 [370] AIM Modernization Segment 3 Investment Analysis Readiness Decision
 [371] AIM Modernization Segment 3 Initial Investment Decision
 [372] TBFM/IES Concept and Requirements Definition Readiness Decision
 [385] Initial Investment Decision of common Information Display Systems (IDS) capability in En Route and Terminal
 [386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision
 [387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision
 [388] NextGen ATOP/Offshore Automation Initial Investment Decision
 [389] NextGen ATOP/Offshore Automation Final Investment Decision
 [437] Flight Data Interface Modernization Concept and Requirements Definition Readiness Decision
 [438] Flight Data Interface Modernization Investment Analysis Readiness Decision
 [439] Flight Data Interface Modernization Initial Investment Decision
 [440] Flight Data Interface Modernization Final Investment Decision
 [596] Traffic Flow Management Sustainment Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 14 / 3

Identifier: AUTO-06

Description: Service Units will be responsible for JRC Final Investment Decisions

Primary Roadmap: Automation

Related Decision(s):

- [2] AIM Modernization Segment 1 Final Investment Decision
- [31] Final Investment Decision for Post ERAM R3 Work Package
- [46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
- [57] TBFM/IES Final Investment Decision
- [65] Common Information Display Systems (IDS) capability in En Route and Terminal Final Investment Decision
- [107] TAMR Phase 3 Final Investment Decision
- [110] Approve final investment for transition to NextGen automation platforms and display subsystem through convergence
- [111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision
- [121] AIM Modernization Segment 2 Final Investment Decision
- [122] AIM Modernization Segment 3 Final Investment Decision
- [125] Alaska Flight Service Modernization (AFSM) Segment 1 Final Investment Decision
- [198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
- [202] En Route /Oceanic IES NextGen WP Final Investment Decision
- [206] Final Investment Decision for SITS Air Domain Security Architecture
- [208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision
- [276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision
- [346] Final Investment Decision for CATMT Work Package 4
- [389] NextGen ATOP/Offshore Automation Final Investment Decision
- [440] Flight Data Interface Modernization Final Investment Decision
- [596] Traffic Flow Management Sustainment Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 82 / 3

Identifier: AUTO-07

Description: Policy and standards decisions prescribing the use of hand-held devices for data messaging by General Aviation pilots and aircraft are established.

Primary Roadmap: Automation

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 83 / 3

Identifier: AUTO-08

Description: Consistent security management across Data Communication, Automation and SWIM support the evolution.

Primary Roadmap: Automation

Related Decision(s): [30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[107] TAMR Phase 3 Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[121] AIM Modernization Segment 2 Final Investment Decision
[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision
[367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision
[368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision
[376] Interface RMLS with SWIM Segment 2 Executive Level Decision
[386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision
[387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision
[388] NextGen ATOP/Offshore Automation Initial Investment Decision
[389] NextGen ATOP/Offshore Automation Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 84 / 3

Identifier: AUTO-09

Description:	Human-system integration will be conducted during analysis, design, development, and testing of Automation programs.
Primary Roadmap:	Automation
Related Decision(s):	<p>[2] AIM Modernization Segment 1 Final Investment Decision</p> <p>[30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)</p> <p>[31] Final Investment Decision for Post ERAM R3 Work Package</p> <p>[33] Investment Analysis Readiness Decision for Security Integrated Tool Suite (SITS)</p> <p>[44] Time Based Flow Management (TBFM)/Integrated Enterprise Solution (IES) Initial Investment Decision</p> <p>[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision</p> <p>[57] TBFM/IES Final Investment Decision</p> <p>[65] Common Information Display Systems (IDS) capability in En Route and Terminal Final Investment Decision</p> <p>[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision</p> <p>[83] Transition to NextGen Far Term automation platforms and display subsystem through convergence Initial Investment Decision</p> <p>[107] TAMR Phase 3 Final Investment Decision</p> <p>[110] Approve final investment for transition to NextGen automation platforms and display subsystem through convergence</p> <p>[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision</p> <p>[115] Approve Tower Flight Data Manager 1 Initial Investment Decision</p> <p>[121] AIM Modernization Segment 2 Final Investment Decision</p> <p>[122] AIM Modernization Segment 3 Final Investment Decision</p> <p>[125] Alaska Flight Service Modernization (AFSM) Segment 1 Final Investment Decision</p> <p>[177] Initial Investment Decision for SITS Air Domain Security Architectures</p> <p>[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision</p> <p>[201] En Route /Oceanic IES NextGen WP Initial Investment Decision</p> <p>[202] En Route /Oceanic IES NextGen WP Final Investment Decision</p> <p>[206] Final Investment Decision for SITS Air Domain Security Architecture</p> <p>[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision</p> <p>[275] Terminal Automation NextGen Mid-Term Work Package Initial Investment Decision</p> <p>[276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision</p> <p>[346] Final Investment Decision for CATMT Work Package 4</p> <p>[354] CATMT Work Package 4 Concept and Requirements Definition Readiness Decision</p> <p>[355] CATMT Work Package 4 Investment Analysis Readiness Decision</p> <p>[356] CATMT Work Package 4 Initial Investment Decision</p> <p>[357] TBFM/IES Investment Analysis Readiness Decision</p> <p>[358] En Route /Oceanic IES NextGen WP Concept and Requirements Definition Readiness Decision</p> <p>[359] En Route /Oceanic IES NextGen WP Investment Analysis Readiness Decision</p> <p>[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision</p> <p>[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision</p> <p>[362] Terminal Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision</p> <p>[363] Terminal Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision</p> <p>[364] Transition to NextGen Far Term automation platforms and display subsystem through convergence Concept and Requirements Definition Readiness Decision</p> <p>[365] Transition to NextGen Far Term automation platforms and display subsystem through convergence Investment Analysis Readiness Decision</p> <p>[367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision</p> <p>[368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision</p> <p>[369] AIM Modernization Segment 3 Concept and Requirements Definition Readiness Decision</p> <p>[370] AIM Modernization Segment 3 Investment Analysis Readiness Decision</p> <p>[371] AIM Modernization Segment 3 Initial Investment Decision</p> <p>[372] TBFM/IES Concept and Requirements Definition Readiness Decision</p> <p>[385] Initial Investment Decision of common Information Display Systems (IDS) capability in En Route and Terminal</p> <p>[386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision</p> <p>[387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision</p> <p>[388] NextGen ATOP/Offshore Automation Initial Investment Decision</p> <p>[389] NextGen ATOP/Offshore Automation Final Investment Decision</p> <p>[437] Flight Data Interface Modernization Concept and Requirements Definition Readiness Decision</p> <p>[438] Flight Data Interface Modernization Investment Analysis Readiness Decision</p> <p>[439] Flight Data Interface Modernization Initial Investment Decision</p> <p>[440] Flight Data Interface Modernization Final Investment Decision</p> <p>[596] Traffic Flow Management Sustainment Final Investment Decision</p>
Update Date:	30-Oct-2009 by Don Embt

Identifier:	AUTO-10
Description:	Safety analysis and considerations will be included in all applicable phases of Automation analysis, design, development, and testing and platforms will provide data as required for safety monitoring and analysis.
Primary Roadmap:	Automation
Related Decision(s):	<p>[2] AIM Modernization Segment 1 Final Investment Decision</p> <p>[30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)</p> <p>[31] Final Investment Decision for Post ERAM R3 Work Package</p> <p>[33] Investment Analysis Readiness Decision for Security Integrated Tool Suite (SITS)</p> <p>[44] Time Based Flow Management (TBFM)/Integrated Enterprise Solution (IES) Initial Investment Decision</p> <p>[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision</p> <p>[57] TBFM/IES Final Investment Decision</p> <p>[65] Common Information Display Systems (IDS) capability in En Route and Terminal Final Investment Decision</p> <p>[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision</p> <p>[83] Transition to NextGen Far Term automation platforms and display subsystem through convergence Initial Investment Decision</p> <p>[107] TAMR Phase 3 Final Investment Decision</p> <p>[110] Approve final investment for transition to NextGen automation platforms and display subsystem through convergence</p> <p>[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision</p> <p>[115] Approve Tower Flight Data Manager 1 Initial Investment Decision</p> <p>[121] AIM Modernization Segment 2 Final Investment Decision</p> <p>[122] AIM Modernization Segment 3 Final Investment Decision</p> <p>[125] Alaska Flight Service Modernization (AFSM) Segment 1 Final Investment Decision</p> <p>[177] Initial Investment Decision for SITS Air Domain Security Architectures</p> <p>[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision</p> <p>[201] En Route /Oceanic IES NextGen WP Initial Investment Decision</p> <p>[202] En Route /Oceanic IES NextGen WP Final Investment Decision</p> <p>[206] Final Investment Decision for SITS Air Domain Security Architecture</p> <p>[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision</p> <p>[275] Terminal Automation NextGen Mid-Term Work Package Initial Investment Decision</p> <p>[276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision</p> <p>[346] Final Investment Decision for CATMT Work Package 4</p> <p>[354] CATMT Work Package 4 Concept and Requirements Definition Readiness Decision</p> <p>[355] CATMT Work Package 4 Investment Analysis Readiness Decision</p> <p>[356] CATMT Work Package 4 Initial Investment Decision</p> <p>[357] TBFM/IES Investment Analysis Readiness Decision</p> <p>[358] En Route /Oceanic IES NextGen WP Concept and Requirements Definition Readiness Decision</p> <p>[359] En Route /Oceanic IES NextGen WP Investment Analysis Readiness Decision</p> <p>[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision</p> <p>[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision</p> <p>[362] Terminal Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision</p> <p>[363] Terminal Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision</p> <p>[364] Transition to NextGen Far Term automation platforms and display subsystem through convergence Concept and Requirements Definition Readiness Decision</p> <p>[365] Transition to NextGen Far Term automation platforms and display subsystem through convergence Investment Analysis Readiness Decision</p> <p>[367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision</p> <p>[368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision</p> <p>[369] AIM Modernization Segment 3 Concept and Requirements Definition Readiness Decision</p> <p>[370] AIM Modernization Segment 3 Investment Analysis Readiness Decision</p> <p>[371] AIM Modernization Segment 3 Initial Investment Decision</p> <p>[372] TBFM/IES Concept and Requirements Definition Readiness Decision</p> <p>[385] Initial Investment Decision of common Information Display Systems (IDS) capability in En Route and Terminal</p> <p>[386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision</p> <p>[387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision</p> <p>[388] NextGen ATOP/Offshore Automation Initial Investment Decision</p> <p>[389] NextGen ATOP/Offshore Automation Final Investment Decision</p>

[437] Flight Data Interface Modernization Concept and Requirements Definition Readiness Decision
[438] Flight Data Interface Modernization Investment Analysis Readiness Decision
[439] Flight Data Interface Modernization Initial Investment Decision
[440] Flight Data Interface Modernization Final Investment Decision
[596] Traffic Flow Management Sustainment Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 89 / 3

Identifier: AUTO-11

Description: Automation platform designs will support environmental and energy saving initiatives.

Primary Roadmap: Automation

Related Decision(s): [2] AIM Modernization Segment 1 Final Investment Decision
[30] Investment Analysis Readiness Decision for Tower Flight Data Manager 1 (TFDM1)
[31] Final Investment Decision for Post ERAM R3 Work Package
[33] Investment Analysis Readiness Decision for Security Integrated Tool Suite (SITS)
[44] Time Based Flow Management (TBFM)/Integrated Enterprise Solution (IES) Initial Investment Decision
[46] Tower Flight Data Manager 1 (TFDM1) Final Investment Decision
[57] TBFM/IES Final Investment Decision
[65] Common Information Display Systems (IDS) capability in En Route and Terminal Final Investment Decision
[75] En Route Automation NextGen Mid-Term Work Package Initial Investment Decision
[83] Transition to NextGen Far Term automation platforms and display subsystem through convergence Initial Investment Decision
[107] TAMR Phase 3 Final Investment Decision
[110] Approve final investment for transition to NextGen automation platforms and display subsystem through convergence
[111] En Route Automation NextGen Mid-Term Work Package Final Investment Decision
[115] Approve Tower Flight Data Manager 1 Initial Investment Decision
[121] AIM Modernization Segment 2 Final Investment Decision
[122] AIM Modernization Segment 3 Final Investment Decision
[125] Alaska Flight Service Modernization (AFSM) Segment 1 Final Investment Decision
[177] Initial Investment Decision for SITS Air Domain Security Architectures
[198] Tower Flight Data Manager 2 (TFDM2) Final Investment Decision
[201] En Route /Oceanic IES NextGen WP Initial Investment Decision
[202] En Route /Oceanic IES NextGen WP Final Investment Decision
[206] Final Investment Decision for SITS Air Domain Security Architecture
[208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision
[275] Terminal Automation NextGen Mid-Term Work Package Initial Investment Decision
[276] Terminal Automation NextGen Mid-Term Work Package Final Investment Decision
[346] Final Investment Decision for CATMT Work Package 4
[354] CATMT Work Package 4 Concept and Requirements Definition Readiness Decision
[355] CATMT Work Package 4 Investment Analysis Readiness Decision
[356] CATMT Work Package 4 Initial Investment Decision
[357] TBFM/IES Investment Analysis Readiness Decision
[358] En Route /Oceanic IES NextGen WP Concept and Requirements Definition Readiness Decision
[359] En Route /Oceanic IES NextGen WP Investment Analysis Readiness Decision
[360] En Route Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
[361] En Route Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
[362] Terminal Automation NextGen Mid-Term Work Package Concept and Requirements Definition Readiness Decision
[363] Terminal Automation NextGen Mid-Term Work Package Investment Analysis Readiness Decision
[364] Transition to NextGen Far Term automation platforms and display subsystem through convergence Concept and Requirements Definition Readiness Decision
[365] Transition to NextGen Far Term automation platforms and display subsystem through convergence Investment Analysis Readiness Decision
[367] Meteorological and Aeronautical Planning System (MAPS) Investment Analysis Readiness Decision
[368] Meteorological and Aeronautical Planning System (MAPS) Initial Investment Decision

[369] AIM Modernization Segment 3 Concept and Requirements Definition Readiness Decision
 [370] AIM Modernization Segment 3 Investment Analysis Readiness Decision
 [371] AIM Modernization Segment 3 Initial Investment Decision
 [372] TBFM/IES Concept and Requirements Definition Readiness Decision
 [385] Initial Investment Decision of common Information Display Systems (IDS) capability in En Route and Terminal
 [386] NextGen ATOP/Offshore Automation Concept and Requirements Definition Readiness Decision
 [387] NextGen ATOP/Offshore Automation Investment Analysis Readiness Decision
 [388] NextGen ATOP/Offshore Automation Initial Investment Decision
 [389] NextGen ATOP/Offshore Automation Final Investment Decision
 [437] Flight Data Interface Modernization Concept and Requirements Definition Readiness Decision
 [438] Flight Data Interface Modernization Investment Analysis Readiness Decision
 [439] Flight Data Interface Modernization Initial Investment Decision
 [440] Flight Data Interface Modernization Final Investment Decision
 [596] Traffic Flow Management Sustainment Final Investment Decision

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 90 / 3

Identifier: COMM-01

Description: NAS must transition from dedicated "nailed up" sector-based and independent facility operations to networked area based operations

Primary Roadmap: Communications

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 24 / 2

Identifier: COMM-02

Description: FTI becomes primary Voice/Data transport system
(a) ASTI (ANICS) will not be integrated into FAA Telecommunications Infrastructure contract

Primary Roadmap: Communications

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 25 / 2

Identifier: COMM-03

Description: NAS Voice Switch is required to meet consolidation/collocation, Business Continuity Plan, Load Balancing/Load Sharing, 4D Trajectory concepts (resource mapped to flows, and Big Airspace)

Primary Roadmap: Communications

Related Decision(s): [34] Decision on Voice Bridge Contract (Align with NVS IID)
[47] Final Investment Decision for NAS Voice Switch
[339] Initial Investment Decision for NAS Voice Switch

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 26 / 4

Identifier: COMM-04

Description: All flight safety critical A/G communications are over VHF based systems
(a) 8.33 KHz spacing for voice communications may be necessary to provide sufficient spectrum for data communications
(b) Advisory communications (e.g. Weather, NAS Status, NOTAMS) may be supported by commercial communications services through "airborne SWIM" services.
Initial Implementation linked to NextGen Network Enabled Weather (NNEW) capability

Primary Roadmap: Communications

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 27 / 2

Identifier: COMM-05

Description: Infrastructure evolution is driven by:
(a) Transition strategies start in higher altitude airspaces migrating toward lower altitudes
(b) Implementation starts in large facilities migrating to small facilities
(c) Expectation for reduction in number of facilities-(staffed and unstaffed)
(d) Infrastructure and people "dedicated to specific airspace" changing to "quickly and easily adapted to airspace as needed"
(e) Expectation for very low growth in number of operational sectors ("airspace growth") through the mid term, limiting demand on dedicated resources

Primary Roadmap: Communications

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 28 / 2

Identifier: COMM-07

Description: There will be a JRC decision in 2014 (DP 214) to decommission LDRCL. LDRCL users will transition to FTI-2 Services.

Primary Roadmap: Communications

Related Decision(s): [214] Determine to Sustain or Decommission LDRCL

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 30 / 3

Identifier: COMM-08

Description: There will be a JRC decision in 2010 (DP 215) to decommission RCL. RCL users will transition to FTI-1 Services.
(a) It is also assumed that in this time frame the BWM is being used solely in conjunction with the RCL, and so will be decommissioned in concert with the RCL.

Primary Roadmap: Communications

Related Decision(s): [215] Determine to Sustain or Decommission RCL

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 31 / 3

Identifier: COMM-09

Description: There will be an approved transition plan for migrating real-time surveillance data directly onto FTI services in order to allow DMN decommissioning.

Primary Roadmap: Communications

Related Decision(s): [102] Final Investment Decision to implement SIM in terminal and en route legacy radar systems

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 32 / 3

Identifier: COMM-10

Description: There will be a decision (DP 218) whether to implement ATC data communications capabilities using yet to be defined broad-band communications links in addition to VDL-2.

Primary Roadmap: Communications

Related Decision(s): [218] CRDR for migration to L-band for DataComm

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 33 / 6

Identifier: COMM-11

Description: Relationship between SWIM and Communications: SWIM requires FTI IP service.

Primary Roadmap: Communications

Related Decision(s): [208] Meteorological and Aeronautical Planning System (MAPS) Final Investment Decision

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 34 / 3

Identifier: COMM-12

Description: Three ICSS switches in Alaska AFSSs (represented by AFSM on the Roadmap) will be replaced by NVS switches. The coordination for this replacement is captured by DP 203.

Primary Roadmap: Communications

Related Decision(s): [203] Flight Service, AFSM Voice System Provisioning Coordination with NVS

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 35 / 4

Identifier: ES-01

Description: FAA Net Centric Programs will exchange information based on Service Oriented Architecture principles, comply with SWIM policies and standards and use SWIM core infrastructure to the extent practicable

Primary Roadmap: Enterprise Services

Related Decision(s): [277] Final Investment Decision for SWIM Segment 2 (Baseline FY12 - 16)

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 50 / 3

Identifier: ES-02

Description: SWIM will provide policies, standards, and core infrastructure to support data management, based on existing systems and networks to the extent practicable, and using proven technologies to reduce cost and risk

Primary Roadmap: Enterprise Services

Related Decision(s): [277] Final Investment Decision for SWIM Segment 2 (Baseline FY12 - 16)

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 51 / 2

Identifier: FAC-01

Description: Business Continuity will be integrated into the design of the NextGen Facilities

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 52 / 2

Identifier: FAC-02

Description: Facilities will be built to mandated security and safety guidelines

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 53 / 2

Identifier: FAC-03

Description: The airspace will be restructured to accommodate transitional and NextGen airspace concepts (e.g. Big Airspace, flexible airspace, classic en route airspace, mixed equipage airspace, special use airspace, super-density flexible airspace, etc.)

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 54 / 2

Identifier: FAC-04

Description: NextGen Facilities will use a new geo-independent model, where service delivery is best aligned to manage costs and increase efficiencies

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 55 / 2

Identifier: FAC-05

Description: Accommodate up to three (3) times the amount of air traffic with no resulting net increase in the number of controllers

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 56 / 4

Identifier: FAC-06

Description: ATC tasks will evolve consistent with changes in the management of airspace

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 57 / 2

Identifier: FAC-07

Description: NextGen Facilities will accommodate NextGen automation and enterprise services enhancements

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 58 / 3

Identifier: FAC-08

Description: Site locations will be determined according to a number of factors that consider safety, security, and human resources

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 59 / 2

Identifier: FAC-09

Description: Facilities Unstaffed (UIS) Roadmap depicts only significant AMS (FID and ISD) and policy/strategy decisions from other Infrastructure Roadmaps that affect UIS Facilities

Primary Roadmap: Facilities

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 60 / 3

Identifier: HSI-01

Description: The HSI Roadmap relates to the NextGen changes in roles and responsibilities (and therefore procedures), but also includes human-system performance and productivity, safety (human reliability), information requirements and information display, personnel selection, training, and staffing impacts.

Primary Roadmap: Human Systems Integration

Related Decision(s): [577] Prototype application of internationally harmonized human reliability assessment tool requirements

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 61 / 3

Identifier: HSI-02

Description: Human Factors analysis, design, development, and testing are to be accomplished within program/project detailed system engineering activities and not necessarily represented in the HSI Roadmap.

Primary Roadmap: Human Systems Integration

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 62 / 3

Identifier: HSI-03

Description: NAS infrastructure and capabilities are not constrained by limitations in personnel staffing, selection, and training unless otherwise identified.

Primary Roadmap: Human Systems Integration

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 63 / 4

Identifier: HSI-04

Description: Additional HSI impacts and dependencies are to be fully analyzed as needed in terms of:

- a) Convergent or divergent roles (e.g., new actors, obsolete roles)
- b) Implied role changes not apparent in the OI description
- c) Non-OI dependent changes to roles/functions
- d) More comprehensive Far-term OI impacts on the human actors in the workforce and work environments

Primary Roadmap: Human Systems Integration

Related Decision(s): [577] Prototype application of internationally harmonized human reliability assessment tool requirements

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 64 / 4

Identifier: HSI-05

Description: "Gaps" in concept of ops/concept of use (such as off-nominal scenarios) will be filled to identify and resolve other changes in roles and responsibilities.

Primary Roadmap: Human Systems Integration

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 65 / 4

Identifier: HSI-06

Description: NextGen HSI Roadmap products represent information requirements, guidelines, standards, design requirements, specifications, methods, and tools for incorporating human factors in NextGen NAS Enterprise Architecture. (Other core human factors program requirements are not fully represented.)

Primary Roadmap: Human Systems Integration

Related Decision(s): [577] Prototype application of internationally harmonized human reliability assessment tool requirements

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 66 / 4

Identifier: HSI-07

Description: Notional "Operational Improvements" devised for the purposes of constructing the Tech Ops HSI Roadmap will be validated.

Primary Roadmap: Human Systems Integration

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 87 / 3

Identifier: IPE-01

Description: The Internal Policy Enforcement (IPE) capability is needed to mitigate information security risk arising from (1) the NAS insider threat, (2) the Enterprise Boundary Protection (EBP) residual risk, and (3) the malicious or accidental introduction of malicious software (malware) into the NAS.

Primary Roadmap: Information System Security

Related Decision(s): [295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[588] Transition plan for NAS Programs to use the Internal Policy Enforcement capability completed

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 108 / 2

Identifier: ISS-01

Description: The responsibility for providing information security to the NAS will be extended from individual NAS programs/systems to the NAS Enterprise which will offer five enterprise level information security capabilities: (1) Enterprise Boundary Protection, (2) Incident Detection & Response (including incident prevention and audit), (3) Certified Software Management, (4) Internal Policy Enforcement (protection of data flows between NAS systems), and (5) Identity and Key Management. Individual NAS programs/systems will implement these five capabilities according to their SCAP Plan of Actions and Milestones and in coordination with the capability providers. Other NAS security capabilities, e.g. local system security management, will remain the sole responsibility of individual systems.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 67 / 4

Identifier: ISS-02

Description: The NAS Enterprise Level Information Security will leverage existing programs to provide the five enterprise level ISS capabilities:
(1) NAS WAN Infrastructure Provider, e.g. FTI, for the initial network level boundary protection
(2) FTI and SWIM Segment 2 for hosting the application gateways for External Boundary Protection and application guards for Internal Policy Enforcement.
(3) CSMC and SIG for the enterprise Incident [Prevention] Detection & Response
(4) LAACS and SWIM Segment 2 for the Identity and Key Management capability
(5) SWIM Segment 2 for the Certified Software Management capability

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 68 / 4

Identifier: ISS-03

Description: Enterprise security policy and governance structure will exist for intrusion detection and response such that the NAS is monitored for malware and other ISS events.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[585] Transition plan for NAS Programs to use the Intrusion Detection & Response capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 69 / 5

Identifier: ISS-04

Description: Information regarding all security incidents and events is transmitted to the Cyber Security Management Center (CSMC) for analysis.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[585] Transition plan for NAS Programs to use the Intrusion Detection & Response capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 70 / 4

Identifier: ISS-05

Description: Coordination of NAS ISS incident detection and response is through the NAS Security Information Group (SIG).

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[585] Transition plan for NAS Programs to use the Intrusion Detection & Response capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 71 / 4

Identifier: ISS-06

Description: A standard NAS Intrusion Detection System architecture and design will be developed cooperatively between AIS and ATO.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[585] Transition plan for NAS Programs to use the Intrusion Detection & Response capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 72 / 4

Identifier: ISS-07

Description: NAS programs, the SIG, and CSMC will cooperatively plan and engineer the NAS intrusion detection system monitoring, analysis, and response capability.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[585] Transition plan for NAS Programs to use the Intrusion Detection & Response capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 105 / 2

Identifier: ISS-08

Description: Data flows into the NAS from non-NAS entities (external) are potential vectors of information security attack to the NAS and must be protected by the Enterprise Boundary Protection (EBP) capability.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[589] Transition plan for NAS Programs to use the External Boundary Protection capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 106 / 3

Identifier: ISS-09

Description: For each external data flow requiring boundary protection, FTI will provide the communications transport between the NAS system and the EBP gateway.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[589] Transition plan for NAS Programs to use the External Boundary Protection capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 107 / 3

Identifier: ISS-10

Description: Identity and Key Management services for the NAS (users and information technology devices) will be provided over the next 5 years by extensively leveraging functional capabilities available through the LAACS or SWIM programs or both.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[300] FID for I&KM Mid Term Work Package
[522] Transition plan for NAS Programs to use Identity and Key Management Enterprise capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 109 / 2

Identifier: ISS-11

Description: The FAA is planning to first implement Identity and key management services for non-NAS systems and users during which time NAS prototype activities will take place for Identity and Key Management encryption-based services.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[300] FID for I&KM Mid Term Work Package
[522] Transition plan for NAS Programs to use Identity and Key Management Enterprise capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 110 / 2

Identifier: ISS-12

Description: AIO/AIS and ATO will collaborate on the planning and engineering of the identify and key management services for the NAS.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[296] IID for RE&D for I&KM
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[300] FID for I&KM Mid Term Work Package
[522] Transition plan for NAS Programs to use Identity and Key Management Enterprise capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 111 / 3

Identifier: ISS-13

Description: NAS requirements for Identity and Key Management services include authentication, non-repudiation, and confidentiality.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[296] IID for RE&D for I&KM
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[300] FID for I&KM Mid Term Work Package
[522] Transition plan for NAS Programs to use Identity and Key Management Enterprise capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 112 / 3

Identifier: ISS-14

Description: Enterprise security policy will require that official NAS software, configuration, and adaptation data is provided by the Certified Software Management capability of the NAS Enterprise Security Architecture.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[586] Transition plan for NAS Programs to use the Certified Software Management capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 113 / 2

Identifier: ISS-15

Description: The Certified Software Management capability of the NAS Enterprise Security Architecture (NESA) will provide a central repository, access control from any part of the NAS, secure retrieval and transfer, and integrity guarantee.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[586] Transition plan for NAS Programs to use the Certified Software Management capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 114 / 2

Identifier: ISS-16

Description: AIO/AIS and ATO will designate a responsible organization to plan, develop, and implement a Certified Software Management capability.

Primary Roadmap: Information System Security

Related Decision(s): [294] IARD for Mid Term Work Package
[295] FID for ID&R, EBP, IPE, and CSM capabilities of Mid Term Work Package
[297] IID for EBP, ID&R, IPE, and CSM for the Mid Term Work Package
[586] Transition plan for NAS Programs to use the Certified Software Management capability completed
[601] Concept and Requirements Definition Readiness (CRDR) for Information Systems Security Mid Term Work Package

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 116 / 2

Identifier: NAV-01

Description: NextGen implementation requires an aggressive transition to performance-based services. This requires:

- a) close collaboration with the aviation community
- b) a clear definition of the standard services that will be provided by FAA
- c) other services supported by non-Federal entities

Primary Roadmap: Navigation

Related Decision(s): [69] Approved Cat I Instrument Approach policy Allows Cat I Drawdown
[70] Acquisition Decision to establish a Federal Procurement for Ground Based Augmentation System (GBAS) CAT II/III capable systems under the Local Area Augmentation System (LAAS) Program
[81] VOR decision on far-term drawdown
[94] Decision on complete ILS CAT I drawdown
[219] Completion of all WAAS instrument approach procedures (LPV and LP) for all qualifying runways in the National Airspace System (NAS), estimated to be 5500 runway ends. Original date of 2018 was accelerated to 2016
[220] Completion of Dual Frequency (GPS L1 and L5) development & testing for the WAAS ground and space segment hardware, software, and user equipment standards and avionics, required by DoD Mandate, issued September 2008
[222] 24 GPS dual frequency satellites with L1 and L5 operating and transmitting useable signals for aviation.
[225] Decision to proceed with dual frequency multi-constellation GNSS avionics activities to validate standards and lower risk for avionics development
[226] Completion of Dual frequency multi-constellation GNSS avionics activities
[228] Decision to proceed with WAAS dual frequency avionics activities to validate standards and lower risk for avionics development.
[229] Completion of WAAS Dual frequency avionics activities.
[230] Cut-over to dual frequency operations
[235] Decision on active drawdown of Cat I ILSs operating in the NAS
[236] Decision to buy systems for Cat II/III ILSs where necessary
[237] Decision on replacement Cat II/III ILSs operating in the NAS
[239] ALS I LED Lamps are available
[241] Energy efficient ALSF-2 production systems available
[243] Decision to implement enhanced capability based on results of RVR research
[244] Next generation of DMEs available to support RNAV throughout the NAS
[245] Decision on near-term minimum operational VOR ground network
[248] Next generation of LED PAPI systems available
[250] Next generation of LED REIL systems available
[252] Semiflush flasher fixtures production system available
[316] GBAS/LAAS ground facilities and single-frequency avionics available for use
[318] All federal NDBs decommissioned from the NAS
[322] Enhanced low visibility operations supported by navigation infrastructure
[324] ALS (I) - Design and development of PAR 38 and PAR 56 LED replacement lamps is completed
[507] WAAS moves from Phase III to Phase IV
[511] Decision on national backup
[603] LED Prototypes available for testing

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 36 / 2

Identifier: NAV-02

Description: FAA is migrating to NAS-wide performance-based navigation services -- RNAV/RNP (primarily GNSS) for en route, terminal, and approach & landing domains
a) Transition from VORs to GNSS RNAV for enroute and terminal
b) Transition from ILS to GNSS (WAAS/LAAS) for approach and landing
c) CAT I or equivalent approach & landing service will be provided at airports meeting minimum criteria
d) Need to determine to what extent CAT II and CAT III service will be provided by GBAS
*SBAS is WAAS; GBAS is LAAS

Primary Roadmap: Navigation

Related Decision(s): [69] Approved Cat I Instrument Approach policy Allows Cat I Drawdown
[70] Acquisition Decision to establish a Federal Procurement for Ground Based Augmentation System (GBAS) CAT II/III capable systems under the Local Area Augmentation System (LAAS) Program
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[511] Decision on national backup
[603] LED Prototypes available for testing

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 37 / 3

Identifier: NAV-03

Description: Need to continue working closely with users and the avionics industry on equipage issues
a) Current equipage is insufficient to support transition from ground-based infrastructure to performance-based navigation
b) In future, equipage will be in place to support transition to performance-based navigation
c) Implementation dates allow sufficient lead time to accommodate time-lines

Primary Roadmap: Navigation

Related Decision(s): [69] Approved Cat I Instrument Approach policy Allows Cat I Drawdown
[70] Acquisition Decision to establish a Federal Procurement for Ground Based Augmentation System (GBAS) CAT II/III capable systems under the Local Area Augmentation System (LAAS) Program
[81] VOR decision on far-term drawdown
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[511] Decision on national backup
[603] LED Prototypes available for testing

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 38 / 3

Identifier: NAV-04

Description: Policy will be in place to maintain safety, security, and capacity and preclude significant economic impact during GNSS outages

Primary Roadmap: Navigation

Related Decision(s): [69] Approved Cat I Instrument Approach policy Allows Cat I Drawdown
[70] Acquisition Decision to establish a Federal Procurement for Ground Based Augmentation System (GBAS) CAT II/III capable systems under the Local Area Augmentation System (LAAS) Program
[81] VOR decision on far-term drawdown
[94] Decision on complete ILS CAT I drawdown
[219] Completion of all WAAS instrument approach procedures (LPV and LP) for all qualifying runways in the National Airspace System (NAS), estimated to be 5500 runway ends. Original date of 2018 was accelerated to 2016
[220] Completion of Dual Frequency (GPS L1 and L5) development & testing for the WAAS ground and space segment hardware, software, and user equipment standards and avionics, required by DoD Mandate, issued September 2008
[222] 24 GPS dual frequency satellites with L1 and L5 operating and transmitting useable signals for aviation.
[225] Decision to proceed with dual frequency multi-constellation GNSS avionics activities to validate standards and lower risk for avionics development
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[507] WAAS moves from Phase III to Phase IV
[511] Decision on national backup
[603] LED Prototypes available for testing

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 39 / 3

Identifier:	NAV-05
Description:	Assume the Department of Defense will maintain a GPS constellation consistent with the Standard Positioning Service.
Primary Roadmap:	Navigation
Related Decision(s):	[344] Establish Requirements for a Backup Timing Source [345] Implementation strategy decision for GPS timing backup
Update Date:	04-Mar-2010 by James Grant
ID / Revision:	40 / 4

Identifier: SAFE-01

Description: ASIAs is part of the Regulatory EA. It is depicted on the Safety Infrastructure Roadmap for coordination purposes since:
a) It will require NAS data.
b) It will provide safety data and tools for the NAS

Primary Roadmap: Safety

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 73 / 4

Identifier: SAFE-02

Description: SMS Implementations for other LOBs are part of the Non-NAS EAs. These activities are depicted on the Safety Infrastructure Roadmap for coordination purposes.

Primary Roadmap: Safety

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 74 / 3

Identifier: SURV-01

Description: Migration to Automatic Dependent Surveillance-Broadcast (ADS-B) as primary means of surveillance
a) Airspace rule to be in effect and backup to be in place by 2020 (compliance date)
 1. Existing surveillance infrastructure will remain in place until 2020
b) WMLAT operations to be tested in Colorado and Alaska

Primary Roadmap: Surveillance

Related Decision(s): [76] Final Investment Decision for removal or SLEP/replace ASDE surface primary radars (evolving requirements for safety and security may impact decision)
[105] Final Investment Decision to implement a NextGen beacon/backup radar system for ATC
[390] Final Investment Decision for legacy beacon (Mode S) SLEP through 2025
[394] Final Investment Decision for Technology Refresh of ATCBI-5 beacon system

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 42 / 4

Identifier: SURV-02

Description: Backup to mitigate loss of on-board GPS positioning source required

- a) Backup strategy was identified in January 2007
 - 1) Retain all en route beacons (~ 150 monopulse systems with selective interrogation)
 - 2) Retain limited set of terminal beacons at Operational Evolution Partnership (OEP)/High Density Terminals (~ 50 locations)
 - 3) A review of the ADS-B Backup Strategy will be conducted to determine which terminal beacon sites are to be kept for backup based on NextGen assumptions such as 3X Capacity
- b) All terminal primary radars are retained
 - 1) Used as safety (ATC) backup
 - 2) May also be retained for aviation security and/or weather requirements

Primary Roadmap: Surveillance

Related Decision(s): [105] Final Investment Decision to implement a NextGen beacon/backup radar system for ATC
[344] Establish Requirements for a Backup Timing Source
[345] Implementation strategy decision for GPS timing backup

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 43 / 4

Identifier: SURV-03

Description: Surface primary radars will not be required after ADS-B rule compliance date

- a) Requires mandated equipage of all surface vehicles
- b) Surface surveillance to be supported by ADS-B
- c) Multilateration will be established as a backup to ADS-B at all ASDE airports

Primary Roadmap: Surveillance

Related Decision(s): [76] Final Investment Decision for removal or SLEP/replace ASDE surface primary radars (evolving requirements for safety and security may impact decision)
[260] Decision on ADS-B Rule Compliance

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 44 / 3

Identifier: SURV-04

Description: PRM-A, with multilateration technology, will replace PRM E-Scan

Primary Roadmap: Surveillance

Related Decision(s): [36] Final Investment Decision for migration of PRM to PRM-A (based on multilateration)

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 45 / 3

Identifier: SURV-05

Description: The following aircraft decisions will have an impact on surveillance: 52, and 260. For full descriptions see decision spreadsheet.

Primary Roadmap: Surveillance

Related Decision(s): [260] Decision on ADS-B Rule Compliance

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 46 / 4

Identifier: SURV-06

Description: Department of Defense/Department of Homeland Security continues to maintain LRR systems through 2025

Primary Roadmap: Surveillance

Related Decision(s): None

Update Date: 30-Oct-2009 by Don Embt

ID / Revision: 47 / 2

Identifier:	SURV-07
Description:	Digital automation system inputs are assumed for implementation of SIM
Primary Roadmap:	Surveillance
Related Decision(s):	[31] Final Investment Decision for Post ERAM R3 Work Package [102] Final Investment Decision to implement SIM in terminal and en route legacy radar systems [107] TAMR Phase 3 Final Investment Decision
Update Date:	04-Mar-2010 by James Grant
ID / Revision:	104 / 2

Identifier:	WX-01
Description:	Ongoing NextGen Weather functional and performance requirements development may result in new/emerging requirements that create perturbations in NextGen Weather Architecture
Primary Roadmap:	Weather
Related Decision(s):	[79] Investment Analysis Readiness Decision (IARD) for NextGen Wx Processor WP1 and NNEW WP1 to enter IA [86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG)) [89] Final Investment Decision for NextGen Wx Processor WP1
Update Date:	04-Mar-2010 by James Grant
ID / Revision:	15 / 3

Identifier:	WX-02
Description:	Weather Sensor Sustainment Issues: 1) Terminal Portfolio approach a) Wind Shear systems (LLWAS, WSP, TDWR & LIDAR) consolidated into WSDS (Wind Shear Detection Services) to sustain capabilities with DP's for IARD, IID, FID & ISD b) Perform ATO-T Wx 'Right Sizing' study for NextGen Sfc Observing Capability; then consolidate Automated Sfc Observing systems (ASOS, AWOS, AWSS) plus F-420, DASI, WME & CHI into a single platform if NG Sfc Observing requirements permit 2) NextGen Surveillance/Weather Radar continues to support Weather requirements (Terminal & En route) 3) Continue obtaining Surface Observations from non-Fed AWOS systems ...

- 4) Both NextGen Surveillance/Weather Radar & Sfc Observing capabilities will consider multi-agency requirements

Primary Roadmap: Weather

Related Decision(s): [37] IARD to Tech Refresh/SLEP wind shear detection services capability of all WS systems (to address wind shear study & technologies)
[85] Investment Decision (IARD) to Consolidate & Replace Automated Surface Observing Systems
[445] IID to consolidate and replace automated surface observing capability with multi-agency NextGen Surface Observing capability
[446] FID to consolidate and replace automated surface observing capability

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 16 / 3

Identifier: WX-03

Description: 1) WMSCR ADAS/ALDARS functionality to be subsumed by NNEW WP 2 (information extraction functionality of NNEW WP2 enables publishing of lightning reports to NG Sfc Observing capability)
2) Having replaced aging technology, ADAS-Rehost serves as a consolidating access point for Wxobservations at NNCCs (National Network Control Center) rather than ARTCCs

Primary Roadmap: Weather

Related Decision(s): [448] IARD to fund FAA portion of NNEW WP2 & transition WMSCR/ALDARS to Comms to NNEW WP
[449] IID to fund FAA portion of NNEW WP2 & transition WMSCR/ALDARS Comms to NNEW WP2

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 17 / 3

Identifier: WX-04

Description: Wind Shear/Microburst functionality continues to be ground based unless aircraft avionics technology matures to the point where the capability can be transferred to the aircraft

Primary Roadmap: Weather

Related Decision(s): [37] IARD to Tech Refresh/SLEP wind shear detection services capability of all WS systems (to address wind shear study & technologies)

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 18 / 3

Identifier: WX-05

Description: The following aircraft decisions may have an impact on weather: 93, 174. For full descriptions see decision spreadsheet
1) Regulatory action likely per DP 93 to define Wx Sensor equipage for fully-capable aircraft

Primary Roadmap: Weather

Related Decision(s): [93] Rulemaking decision for equipage of Weather Sensors and Wake Turbulence implementation
[174] Agency policy to add ABWTS (Aircraft Based WT Separation) decision support capability to the flight deck

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 19 / 4

Identifier: WX-06

Description: Migrate Wx to common Network Enabled Operations (NEO)
1) Fund FAA portion of multi-agency 4-D Weather Cube development and management
2) Fund FAA portion of the development of associated modeling capability* that produces SAS data/information, implementation and operation of multi-agency 4-D Weather Single Authoritative Source (SAS) for NextGen ATM
*NOTE: 1) modeling capability not part of the 4-D Wx SAS but required to create data
2) In accordance with ICAO ConOps for ATM, ATM includes Service Providers & Users, e.g., pilots & dispatchers

Primary Roadmap: Weather

Related Decision(s): [79] Investment Analysis Readiness Decision (IARD) for NextGen Wx Processor WP1 and NNEW WP1 to enter IA
[86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG))
[89] Final Investment Decision for NextGen Wx Processor WP1

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 20 / 3

Identifier: WX-07

Description: Develop Wx Performance Requirements & pursue aggressive AMS schedule to field NextGen Wx Processor by 2014

Primary Roadmap: Weather

Related Decision(s): [79] Investment Analysis Readiness Decision (IARD) for NextGen Wx Processor WP1 and NNEW WP1 to enter IA
[86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG))
[89] Final Investment Decision for NextGen Wx Processor WP1

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 21 / 4

Identifier: WX-08

Description: Convergence of Wx Processing Capability into NextGen Wx Processor
1) NextGen Weather Processor WP 1
a) CIWS continues as prototype until integrated into NWP WP1 as part of 0-6 hour convective forecast capability
b) WARP RAMP (radar acquisition & mosaic processor) must be sustained into NextGen era until transferred to NextGen system and RBT functionality to general IDS with NNEW-provided data
c) ITWS data/product exchanges to achieve operational consistency among Wx system displays
2) NextGen Wx WP2:
a) Selected Wx R&D algorithms matured since WP1 baseline was frozen
b) Implement improved Convective algorithms from Aviation Wx R&D
c) Majority of ITWS functionality transferred to NWP WP2, except functions allocated to NextGen Far Term Work Package to meet latency requirements of Wind Shear/Microburst Detection & Prediction advisories, or ITWS Tech Refresh
3) NextGen Wx WP3:
a) Selected Wx R&D algorithms matured since WP2 baseline was frozen
4) NextGen Wx Processor WP3 most likely not an FAA 'box'

Primary Roadmap: Weather

Related Decision(s): [79] Investment Analysis Readiness Decision (IARD) for NextGen Wx Processor WP1 and NNEW WP1 to enter IA
[86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG))
[89] Final Investment Decision for NextGen Wx Processor WP1

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 22 / 3

Identifier: WX-09

Description: To provide improved observations & enhanced forecasts, significant R&D and infrastructure changes are required
1) R&D must be prioritized in order to meet NextGen Vision
2) To reach NextGen by 2025 R&D funding (Near/Mid-term) must be increased
3) The output of a number of Algorithms developed via R&D will be available via the 4-D Wx SAS
4) Sensor measurement accuracy and frequency must be increased

Primary Roadmap: Weather

Related Decision(s): [48] Strategy to Fund FAA Portion of NextGen 4-D Weather Cube
[213] Executive Level Decision to fund FAA portion 4-D Wx SAS Tech Refresh
[450] IARD to fund FAA portion of 4-D Weather SAS Tech Refresh
[451] IID to fund FAA portion of 4-D Weather SAS Tech Refresh

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 23 / 6

Identifier: WX-10

Description: Weather information becomes available at user-specified resolution but weather impact is determined by user DST.

Primary Roadmap: Weather

Related Decision(s): [48] Strategy to Fund FAA Portion of NextGen 4-D Weather Cube
[213] Executive Level Decision to fund FAA portion 4-D Wx SAS Tech Refresh
[218] CRDR for migration to L-band for DataComm
[450] IARD to fund FAA portion of 4-D Weather SAS Tech Refresh
[451] IID to fund FAA portion of 4-D Weather SAS Tech Refresh

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 86 / 3

Identifier: WX-11

Description: Wx Comms functionality to be provided by NNEW

Primary Roadmap: Weather

Related Decision(s): [79] Investment Analysis Readiness Decision (IARD) for NextGen Wx Processor WP1 and NNEW WP1 to enter IA
[86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG))
[89] Final Investment Decision for NextGen Wx Processor WP1
[341] Final Investment Decision to transition WMSCR Comms functionality to web access via SWIM Seg 3 & ALDARS Comms to NNEW WP2
[449] IID to fund FAA portion of NNEW WP2 & transition WMSCR/ALDARS Comms to NNEW WP2

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 91 / 2

Identifier: WX-12

Description: That NG Sfc Observing Capability & NG Surv/Wx Radar Capability [systems] will be implemented as multi-agency systems

Primary Roadmap: Weather

Related Decision(s): [77] Initial investment Decision to implement a NextGen Surveillance and Weather Radar Capability for ATC
[85] Investment Decision (IARD) to Consolidate & Replace Automated Surface Observing Systems
[104] Final Investment Decision to implement a NextGen Surveillance and Weather Radar Capability for ATC
[407] Investment Analysis Readiness Decision for NextGen Surveillance and Weather Radar Capability
[445] IID to consolidate and replace automated surface observing capability with multi-agency NextGen Surface Observing capability
[446] FID to consolidate and replace automated surface observing capability

Update Date: 04-Mar-2010 by James Grant

ID / Revision: 92 / 2

Identifier: WX-13

Description: CWSU support system will not be addressed in this Roadmap as it is not envisioned as an FAA system

Primary Roadmap: Weather

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 93 / 1

Identifier: WX-14

Description: WARP Remote Brfg Terminal requirements to be included in National IDS contract

Primary Roadmap: Weather

Related Decision(s): [86] Investment Decision (IID) for NextGen Wx Processor WP1 (includes CIWS functionality, NG WARP functionality & NNEW WP1 functionality (includes WARP WINS & FBWTG))

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 94 / 1

Identifier: WX-15

Description: ASOS maintenance to now be done 'in house' including conducting remote monitoring maintenance of all ASOS; DP 26 (OES EC Strategy Decision regarding ASOS maintenance 'out sourcing') to be deleted

Primary Roadmap: Weather

Related Decision(s): None

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 95 / 1

Identifier: WX-16

Description: CIWS prototype continues receiving Avn Wx R&D funding to develop longer-range Convective forecasts & improved Winter Weather products/forecasts that will be available to operational users

Primary Roadmap: Weather

Related Decision(s): [89] Final Investment Decision for NextGen Wx Processor WP1

Update Date: 27-Jan-2010 by Cindy Magee

ID / Revision: 96 / 1

